

Notice of Allowability

Application No.

09/821,945

Examiner

X L Bautista

Applicant(s)

BERANEK ET AL

Art Unit

2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 4/18/05.
2. ☒ The allowed claim(s) is/are 19.
3. ☒ The drawings filed on 16 June 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

X. L. Bautista
Primary Examiner
Art Unit 2179

DETAILED ACTION

Reasons for Allowance

1. Claim 19 is allowed.
2. The following is an examiner's statement of reasons for allowance:

Independent claim 19 has been carefully considered. Prior art of record fails to teach a system for navigating in a window environment having a chip that has a plurality of neurotropic electrodes on a chip structure for receiving neurotropic signals generated through thought processes; the chip having a plurality of input circuits connected on the chip to the neurotropic electrodes; the input circuits adapted to sample, amplify, and convert the neurotropic signals to produce digital signals, and also adapted to filter out repeated signals within a pre-specified time and for thresholding and signal processing the neurotropic signals; and a sequential digital control circuit adapted to position a pointer in a window on a display in response to the digital signals by advancing a positioning indexer by one for each received signal.

Mitsuru Murakami et al (article entitled Development of a Pointing Device Using EMG Signals) discloses a method for navigating in a window environment. Myoelectric signals (EMG) are measured from surface electrodes and used for positioning a pointing device with a natural control feeling. The EMG signal contains information on the user's intended motion and the force level of the muscles, and its

suitable to an input signal to an interface tool. The system uses EMG signals for controlling a cursor. Murakami fails to teach or suggest a chip having neurotropic electrodes capable of receiving neurotropic signals generated through thought processes, and input circuits for sampling, amplifying, and converting the neurotropic signals to produce digital signals and filter out repeated signals within a pre-specified time and for thresholding and signal processing the neurotropic signals.

Toby Howard (article entitled Controlling computers by thought) discloses a brain computer interface. Computers can be controlled by human thought by implanting tiny electrodes into the brain. Howard teaches that patients wear a skull-cap studded with electrodes. The brain implant can monitor small-scale activity in the brain's motor area. The implant is a hollow glass cone called a "neurotropic electrode", which is inserted through a hole drilled in the skull, into the cerebral cortex just above the ear. The patient's brain is scanned using magnetic-resonance imaging. When the patient is asked to think about moving a limb, the motor area of the brain becomes active. Howard teaches that the implant receives its power from an induction coil sown into in a baseball cap worn by the patient and any signal picked up from motor neuron activity is detected and amplified by a tiny receiver placed under the skull. The electrical activity recorded by the implant controls a cursor on a computer screen and the patient learns to think the cursor from side to

side. Howard fails to teach or suggest that the neurotropic electrodes are included on the chip structure for receiving neurotropic signals when the chip is positioned within the brain of a patient; and input circuits for sampling, amplifying, and converting the neurotropic signals to produce digital signals and filter out repeated signals within a pre-specified time and for thresholding and signal processing the neurotropic signals.

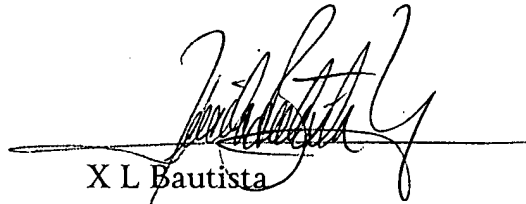
Conclusion

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to X L Bautista whose telephone number is (571) 272-4132. The examiner can normally be reached on Monday-Thursday 8:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (757) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



X L Bautista
Primary Examiner
Art Unit 2179

xlb
29 April 2005